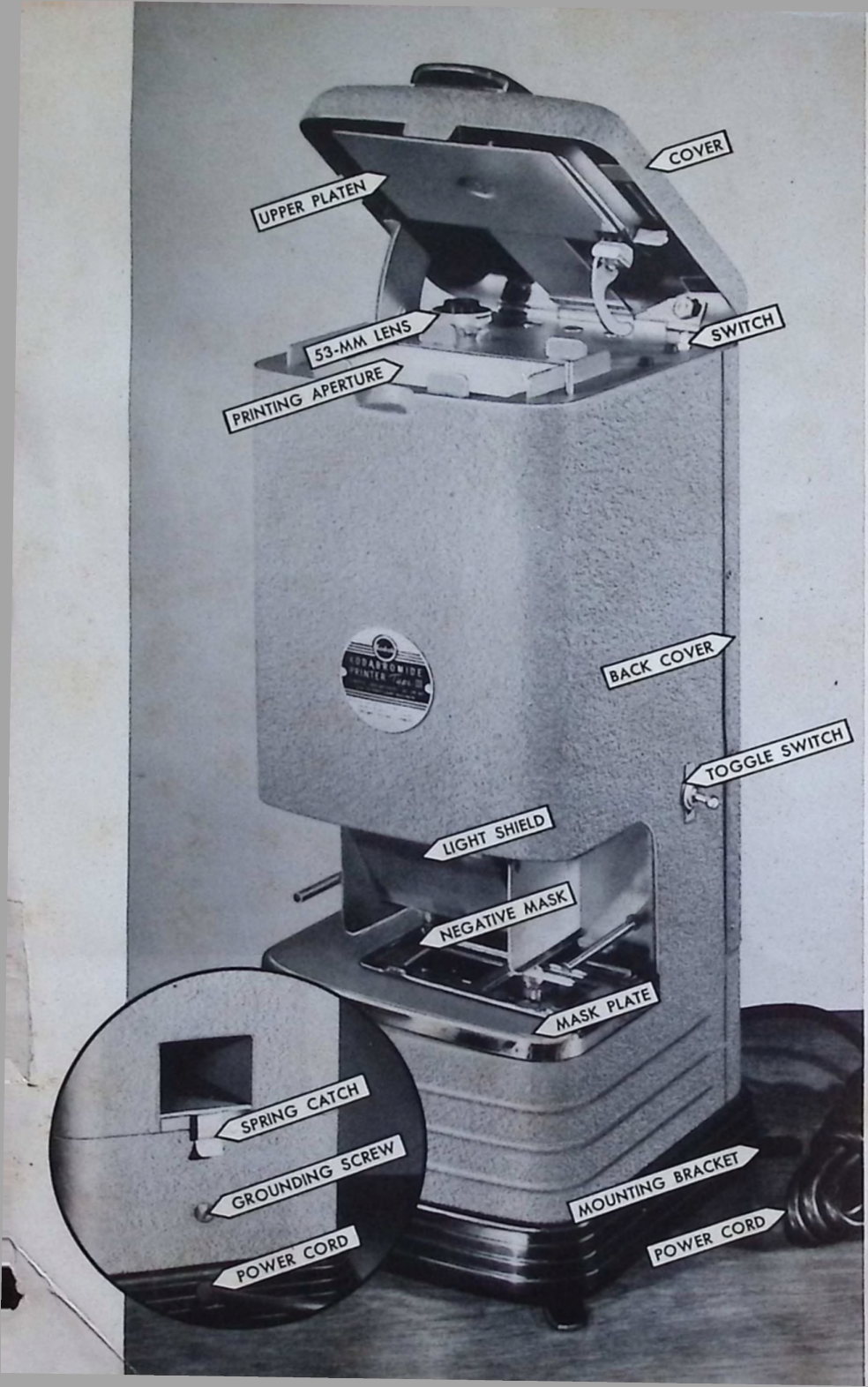
HOW TO USE THE KODABROMIDE PRINTER

TYPE III

For 3¼ x 4½-inch prints from 24 x 36mm, 28 x 40mm, and 13/16 x 19/16-inch negatives.


COVER
UPPER PLATEN
53-MM LENS
SWITCH
PRINTING APERTURE
BACK COVER
TOGGLE SWITCH
LIGHT SHIELD
NEGATIVE MASK
MASK PLATE
SPRING CATCH
GROUNDING SCREW
MOUNTING BRACKET
POWER CORD
POWER CORD

Unpacking and Mounting . . .

The Kodabromide Printer Type III is shipped completely assembled except for the four MOUNTING BRACKETS and the CONDENSER LENS ASSEMBLY (see page 4). To unpack the printer, remove the cardboard spacers on top of and around the machine, take out the separately wrapped parts, lift out the printer, and place it on a table. Remove the packing from the rectangular opening in the rear of the printer.

To install the condenser lens assembly, lift upward on the SPRING CATCH and remove the MASK PLATE. Thoroughly clean the condenser lenses with Kodak Lens Cleaner and place the condenser assembly in the circular opening. Replace the mask plate and latch the spring catch over the locking pin.

The printer is designed for use in a photographic darkroom equipped with Series 0A (greenish yellow) or Series 0 (orange) Wratten Safelights.

If the printer is to be fastened to a table, attach the four mounting brackets to the underside of the printer base. Place the blade of a small screwdriver through the hole in the center of a felt foot and remove the screw and felt foot. Insert the screw through a mounting bracket and replace the parts on the base. Repeat for the other three brackets. Fasten the brackets to the table with four wood screws (not furnished).

Connect a grounding wire to the GROUNDING SCREW on the back of the printer. Do not ground the machine to a gas pipe.

Connect the POWER CORD to a service outlet—100 to 125 volt, ac or dc.

Carefully and thoroughly clean and dust off all parts of the printer before beginning operation. Use Kodak Lens Cleaner on the projection and condenser lenses.

Operation . . .

Place one hand on the COVER of the printer and slide the COVER LATCH forward. When released, the cover will open automatically.

The printer is supplied with two projection lenses—a 49-mm lens for use in making prints from 24 x 36mm negatives, and a 53-mm LENS for use in making prints from 28 x 40mm and 1 $\frac{3}{16}$ x 1 $\frac{9}{16}$-inch negatives. The printer is packed with the 49-mm lens mounted in the operating position, and the 53-mm lens in the storage position under the cover.

To enlarge 24 x 36mm negatives, the 49-mm lens must be in the operating position and the 24 x 36-mm NEGATIVE MASK must be moved to the *right* as far as possible to center it over the condenser lens. To prevent scratches, move the mask before inserting a negative.

To enlarge 28 x 40mm and 1 3/16 x 1 9/16-inch negatives, the 53-mm lens must be in the operating position in the printer and the 28 x 40mm negative mask must be moved to the *left* as far as possible to center it over the condenser lens.

A negative mask is properly located when the small oval opening in the mask plate is completely visible through the green acetate-covered window on the mask.

To change a lens in the printer, push down on the light SHIELD ROD at the right of the PRINTING APERTURE and pull out and lift up the hinged LIGHT SHIELD.

Remove the lens mounted in the operating position by rotating the lens until the two slots in the lens flange are opposite the two locking studs adjacent to the lens opening. Use the same method to remove the lens mounted under the cover of the printer.

Insert the lens to be used for printing in the operating position with the two slots in the lens flange opposite the two locking studs. Turn the lens to engage the lens flange with the locking studs. Use the same method to mount the unused lens for storage under the cover. When the cover is closed, the lens will be protected.

Before positioning a negative for enlargement, push the TOGGLE SWITCH on the right side of the printer to ON to light the PRINTING LAMP at low brilliance for use in framing the negative.

To position 24 x 36mm and 28 x 40mm negative strips for enlargement, lift the front of the negative mask and place the film, emulsion side up, on the mask plate. With the rear edge of the film against the GUIDE STUDS, center the negative to be enlarged over the aperture in the mask plate and lower the mask.

To position a 1 3/16 x 1 9/16-inch negative strip for enlargement, lift

the front of the negative mask and insert the *end* of the film, emulsion side up, beneath the mask and in the opening that extends from the front to the back of the printer. Center the negative to be enlarged over the aperture in the mask plate and lower the mask.

If a single negative is to be enlarged and difficulty is encountered in centering it in the negative mask aperture, remove the mask plate (described in To clean the condenser lenses, page 4), center the negative, and replace the plate.

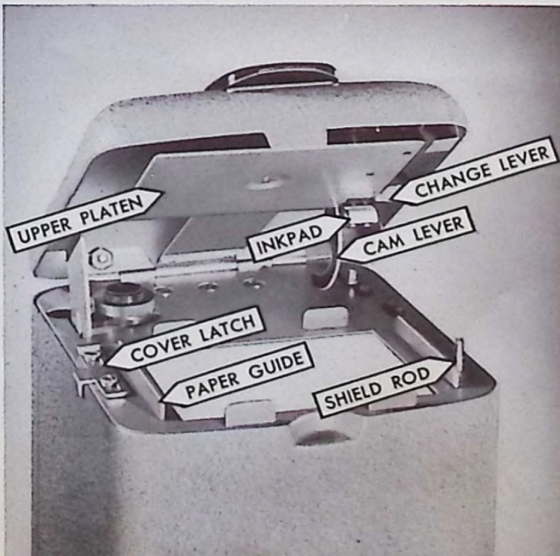
To use the numbering stamp, press the CAM LEVER toward the rear and apply Kodak Numbering Machine Ink directly to the INKPAD. To change the number, press the CHANGE LEVER back as far as it will go and release the lever. To reset the stamp to zero, hold the cam lever back and reset the numbers manually.

Do not permit the stamp to become gummed with excess ink. To remove the inkpad, slide it toward the right.

To make a print, lay a sheet of 3¼ x 4½-inch Kodabromide Paper, emulsion side down, between the PAPER GUIDES at the printing aperture. Close the cover. The UPPER PLATEN in the cover will cause proper contact, and the SWITCH, actuated by the cover, will automatically turn on the printing lamp to its full brilliance and expose the paper. The exposure will continue as long as the cover is depressed and will automatically terminate when the cover is raised. Determine the correct exposure time according to the negative and the paper contrast used. After the exposure is completed, remove the paper from the machine.

To remove or advance a negative, raise the negative mask. Do not remove or advance the film with the mask down.

When the printer is not in use, push the toggle switch to OFF, close the cover, and lock it shut by sliding the cover latch toward the rear of the machine.



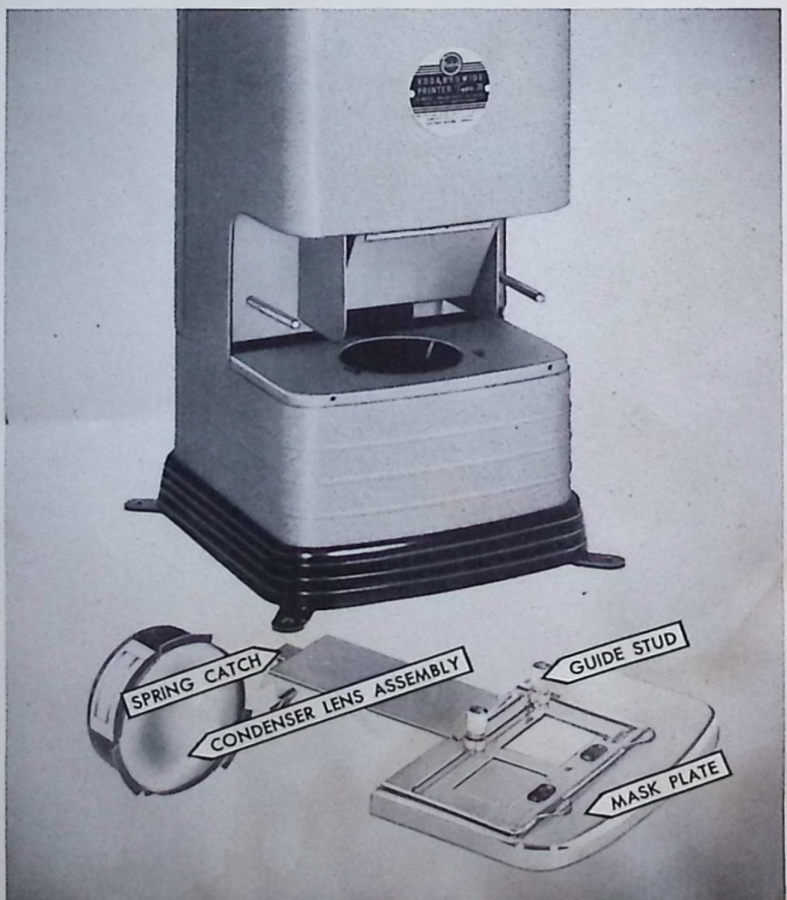
Maintenance . . .

CAUTION: Be sure the toggle switch is at OFF whenever there is danger of the operator's hands coming in contact with the electrical fittings or wires inside the printer.

All parts of the Kodabromide Printer Type III that need cleaning, adjusting, or replacing are easily accessible. The condenser lenses, the REFLECTOR, and the projection lenses must be kept clean at all times.

To clean the condenser lenses, remove the mask plate and carefully lift out the condenser lens assembly. Remove the upper condenser lens, the black band separator, and the lower condenser lens from the condenser mount.

Clean the lens surfaces with Kodak Lens Cleaner and replace the



lenses and spacer in the position shown on the decalcomania attached to the side of the mount.

Place the assembled condenser in the printer and replace the mask plate, making certain that the spring catch is properly locked over the locking pin.

To clean the projection lenses, gently brush off dirt or grit with a soft camel's-hair brush and wipe the outer surfaces with Kodak Lens Cleaner.

If the inner lens surfaces need cleaning, unscrew the front and rear lens elements with the lens wrench packed in the accessory cabinet and wipe the interior surfaces of the lenses with Kodak Lens Cleaner.

When reassembling the lens, be sure that all of the elements are replaced in their original positions and are screwed together tightly.

To clean the reflector, place the printer on its back, remove both the BASE PLATE COVER and the printing lamp, and clean the reflector with Kodak Lens Cleaner.

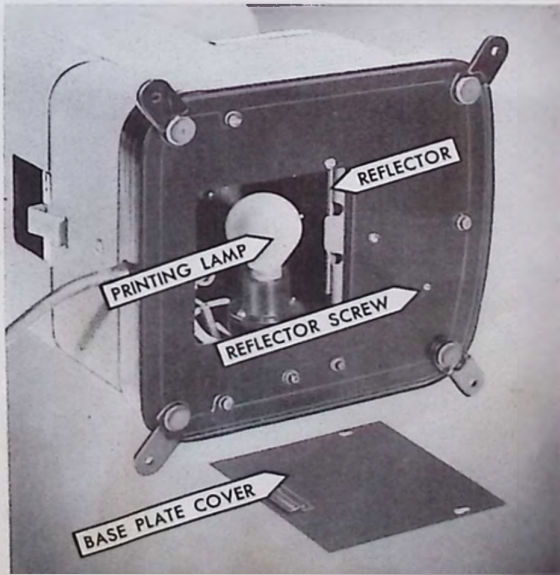
Servicing . . .

CAUTION: Be sure the toggle switch is at OFF whenever there is danger of the operator's hands coming in contact with the electrical fittings or wires inside the printer.

To replace the printing lamp, close and lock the cover and place the printer on its back. Loosen the two screws holding the base plate cover and move the plate cover toward the front of the printer until it can be removed.

Press the printing lamp inward and turn it counterclockwise in its socket. Lift out the lamp and insert a new Mazda No. 111 (105 to 120 volt) Photo Enlarger Lamp in the socket. Press inward on the lamp and turn it clockwise. Replace the base plate cover and tighten the screws.

To remove the reflector for inspection or replacement, lay the



printer on its side and remove the three large screws that hold the base to the printer frame.

Loosen the two screw clamps that hold the reflector in position and slide out the reflector.

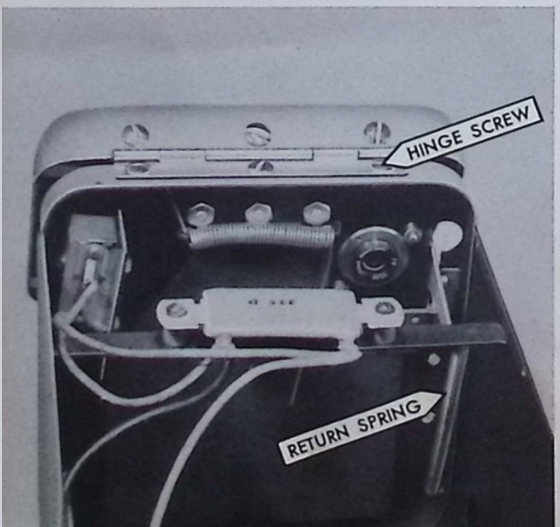
To adjust the illumination—This adjustment has been properly made at the factory and should be regulated *only* if the prints indicate that the illumination is uneven. To make the adjustment, make a test print *without a negative*, adjust the three REFLECTOR SCREWS, and make a second print. When the print is evenly exposed, the angle of the reflector is correct.

To focus the lenses—The lenses are correctly focused during assembly and will need refocusing *only* if the lens barrel is accidentally moved in the lens flange, or if a lens other than those originally furnished is placed in the printer. To focus a lens, loosen the locking screw in the lens flange, place the lens assembly in operating position in the printer, and locate a test negative (any sharp negative) in printing position.

Remove the BACK COVER (four screws on each side of the housing), disconnect the cover RETURN SPRING, and remove the cover and upper platen after taking out the three HINGE SCREWS.

With a piece of string, tie the lower platen down so it will not interfere with the light projected through the lens.

Lay a piece of ground glass (rough surface down) over the printing aperture. Turn on the toggle switch and depress the switch pin with one hand while supporting the light shield and turning the lens barrel with the other. For overall acceptable sharpness of the image projected on the ground glass, balance the focus between the center and the corners of the print area.



NOTE: Be sure to protect sensitized goods in the darkroom from light that comes from the open back of the printer.

Remove the ground glass, release the lower platen, replace the

cover and upper platen, connect the cover return spring, replace the back cover, and make a test print.

If no further adjustment is required, tighten the locking screw. Be sure the barrel does not move in the flange while the screw is being tightened.

If a ground glass is not available, the lens can be focused by making a series of test prints.

To replace the numbering wheel assemblies, remove the back cover (four screws on each side of the housing), disconnect the cover return spring, and remove the cover hinge pin. A small drive punch may be used to start the pin. When the pin is protruding from the hinge, pull it out with a pair of pliers. Remove the cover and upper platen and slide the platen out toward the rear.

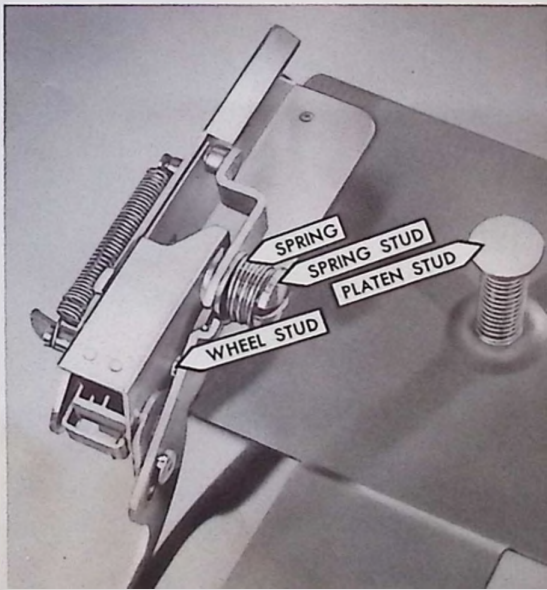
Grasp the end of the cam lever SPRING with a pair of long-nose pliers and disconnect it from the lever. Remove the SPRING STUD and spacing washer and tip the lever back so that the numbering WHEEL STUD may be removed. Unscrew the stud and remove the numbering wheels.

Clean the wheel housing with carbon tetrachloride and install the new wheel assemblies. Replace the numbering wheel stud, the spacing washer, and the cam stud. Reconnect the end of the cam lever spring to the lever and test the return action of the lever. If the action is sluggish, increase the spring torque by pulling the spring clockwise around the stud until it can again be seated in the protrusion on the lever.

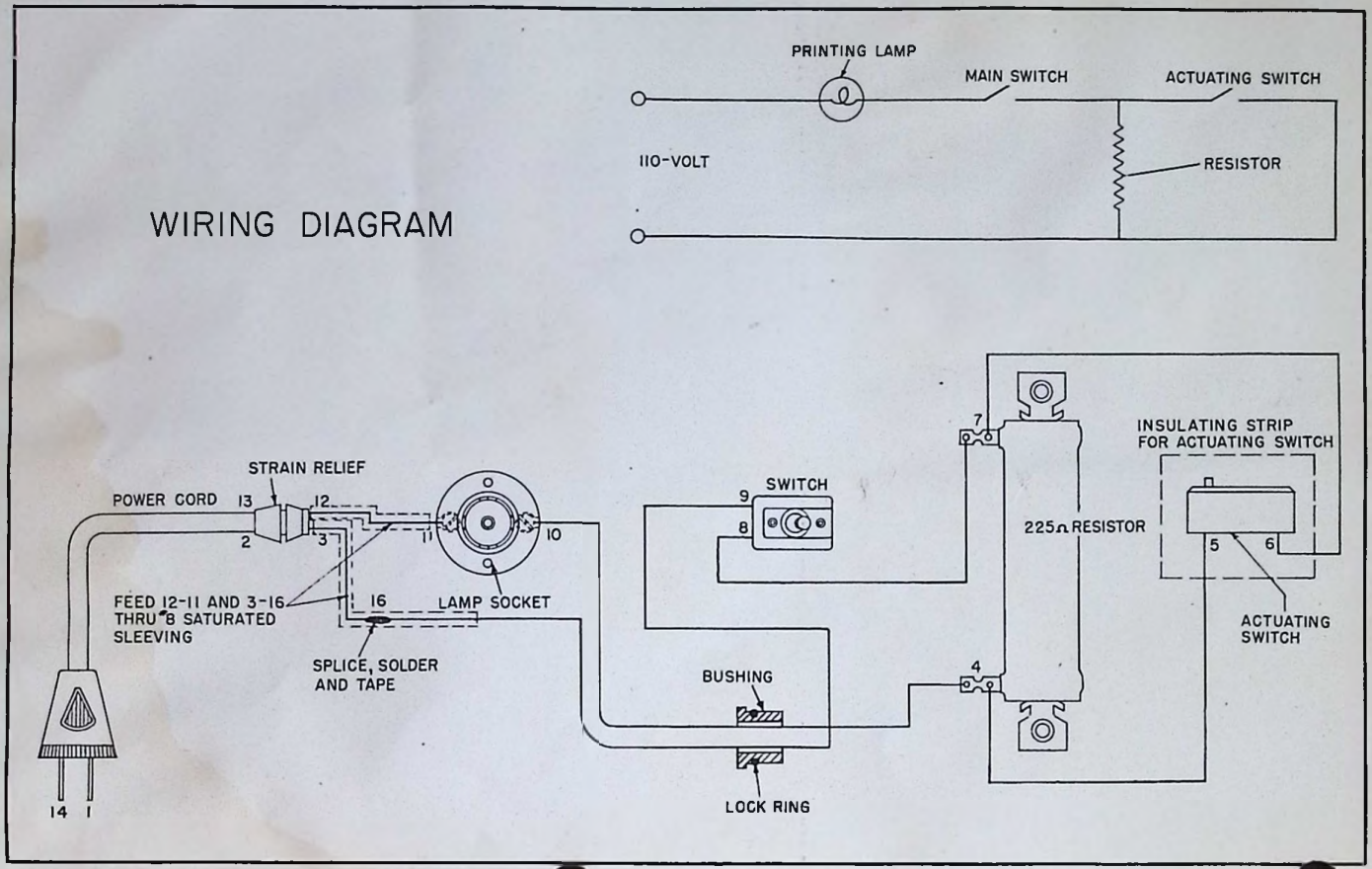
When replacing the platen assembly in the cover, be sure the platen pressure arm (on the underside of the cover) separates the rubber and steel washers on the PLATEN STUD.

Replace the platen and cover, insert the hinge pin, connect the cover return spring, and replace the back cover.

If electrical parts need replacement, be sure the new part is connected as specified in the wiring diagram.



WIRING DIAGRAM



Kodabromide

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Kodabromide—available in five degrees of contrast—is the ideal enlarging paper for use with the Kodabromide Printer.

Its rich black tones are unaffected by exposure variation.... Its wide latitude makes it economical to use.... It renders extremes of light and shade in prints of fine gradation and sparkling brilliance. No. 1—For negatives of high contrast; No. 2—For negatives of normal contrast; No. 3—For negatives of low contrast; No. 4—For negatives of very low contrast; No. 5—For negatives of extremely low contrast.

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